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October 20, 2021

Via Overnight Mail, Electronic Mail and CDRS

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Brandon B. Williams,
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Louisiana Department of Environmental Quality
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Re: Notification of Proposed Alternate Particulate Matter Limit for the Canal Plant - Consent Decree # 6:13-CV-03095, March 11, 2014; AI # 19901

Dear Sir or Madam:

On behalf of Cabot Corporation, please accept this proposal for an alternative 3-Hour Average Emissions Limit for particulate matter (PM) at the Canal facility located in Franklin, LA. This notice is submitted in accordance with the requirements set forth in Paragraphs 30a(a) and 30a(b) of the First Amendment to the above referenced Consent Decree.

Cabot respectfully requests that the 3-Hour Average Emission Limit for PM be set at 0.015 gr/dscf as an alternative to 0.0069 gr/dscf, consistent with the considerations set forth in Paragraph 30a of the Consent Decree, including that the proposed value can be met with a reasonable certainty of compliance. This value reflects the expected emission performance based on the vendor's wet gas scrubber (WGS) design considerations and revised performance guarantee, which are presented in greater detail in Appendix A. This assessment considers a particulate matter distribution analysis as well as the use of dry sorbent injection technology, neither of which were available when establishing the initial PM limit.

Particulate Matter Distribution and Vendor Performance Guarantee

To understand more fully the impact of the particle size on PM emissions, Cabot commissioned a detailed analysis of the size distribution of particulate matter within the emissions from its process systems at the Canal facility. This analysis identified a greater concentration of very small particulate matter than considered by the WGS equipment vendor when projecting particulate matter emission rates based on the preliminary design of the WGS systems. The increased fine particulate in the process emissions makes particulate capture even more challenging. As a result of this analysis, the vendor reported to Cabot that the original design of the WGS technology would be less effective at removing very small particulate matter.

In response, the equipment vendor optimized two aspects of the absorber design to be the most effective at capturing fine particulate matter.

- The vendor's research has shown a strong correlation between slurry spray flux and absorber flue gas velocity with particulate removal in the absorber. The optimal spray flux and velocity were chosen for the Canal plant to ensure maximum particulate capture. With the optimized conditions, the absorber is capable of capturing a portion of the sub-micronic particulate.

- To further minimize particulate emissions, high efficiency mist eliminators were incorporated into the absorber. Mist eliminators achieve the best performance when the gas velocity profile approaching the mist eliminators is even. The vendor's absorber design (tray design, spray header, and mist eliminator orientation) ensures the best velocity profile entering the MEs.

Dry sorbent injection was incorporated into the WGS design to prevent the formation of visible sulfuric acid aerosol (SO_3), also known as "blue plume", at the air pollution control discharge stack. Based on the opacity limit in the current Title V permit for the Canal facility, opacity emissions may not exceed 20%. The DSI system was designed to reduce opacity below this limit.

Based upon the more detailed particulate matter size distribution, the vendor's engineering design team refined its projections for the particulate matter emission rate resulting from application of the WGS system to the affected Process Systems at Cabot's Canal facility. In doing so, the vendor provided a revised performance guarantee of 0.015 gr/dscf.

Initial Operations of the WGS

Cabot commenced operation and demonstrated compliant operation of the WGS prior to April 1, 2021 as required under the Consent Decree for the control of SO_2 emissions. Initial operations of the WGS were consistent with performance expectations and Cabot continued to optimize performance of unit operations in subsequent months, including with respect to operation of the WGS relative to PM emissions and related vendor guarantees. A PM performance test was planned for September 2021 to confirm Cabot's request to establish an alternative emission limit in accordance with the Consent Decree. However, a failure of the demister portion of the WGS occurred in late July 2021, for which Cabot submitted a Force Majeure notice to the agencies. The failure required Cabot to cease process operations pending a substantial rebuild and restart of the WGS. Cabot undertook the rebuild in close coordination with the equipment vendor, and during that process confirmed with the vendor that its PM emission guarantee was not affected or otherwise changed as a result of the rebuild of the WGS. The process and WGS restart commenced in early September, with the process fully back on-line as of mid-September 2021, and WGS optimization continuing in the following weeks. A PM stack test will be conducted on or before November 30, 2021 to confirm compliance with the proposed 3-Hour Average Emission Limit.

Confidential Business Information

Attachment A to this letter contains Confidential Business Information subject to protection under 40 C.F.R. Part 2 and La R.S. 30:2030 and Title 33, Section 501 et. seq. of the

Louisiana Code. The confidential information is commercial and financial information that would tend to cause substantial harm to Cabot's competitive position if disclosed to the public. Accordingly, the confidential portions of the document are redacted from the electronic public versions of this submittal, and the unredacted confidential copies of this submittal are being submitted in hard copy. We ask that the LDEQ and EPA maintain the confidentiality of these documents in accordance with applicable state and federal law.

Conclusion

To summarize, during the design phase of the WGS system, PM emissions were reassessed based on data generated after the initial PM emissions limit was established in the Consent Decree. This assessment indicated that an appropriate 3-Hour Average Emission Limit for PM is 0.015 gr/dscf. This value is inclusive of several design modifications which minimize emissions above and beyond the initial design, while addressing updated information relating to particle size distribution. In accordance with Section 30a(c) of the Consent Decree, the facility will comply with the proposed 3-hour average PM emission limit until 60 days after EPA, with consultation of LDEQ, has provided Cabot written notification regarding this request.

Best regards,

Martin O'Neill
Senior Vice President – Safety Health & Environment

Attachment
cc: Gerard Caron, Gordon Reynolds, Cabot Corporation
Jason Dunn, U.S. DOJ (via electronic mail)
Sam Blesi, U.S. DOJ (via Electronic mail)
Kellie Ortega, U.S. EPA (via electronic mail)
Dwana King, LDEQ (via electronic mail)
Carol McCabe, Manko, Gold, Katcher & Fox, LLP

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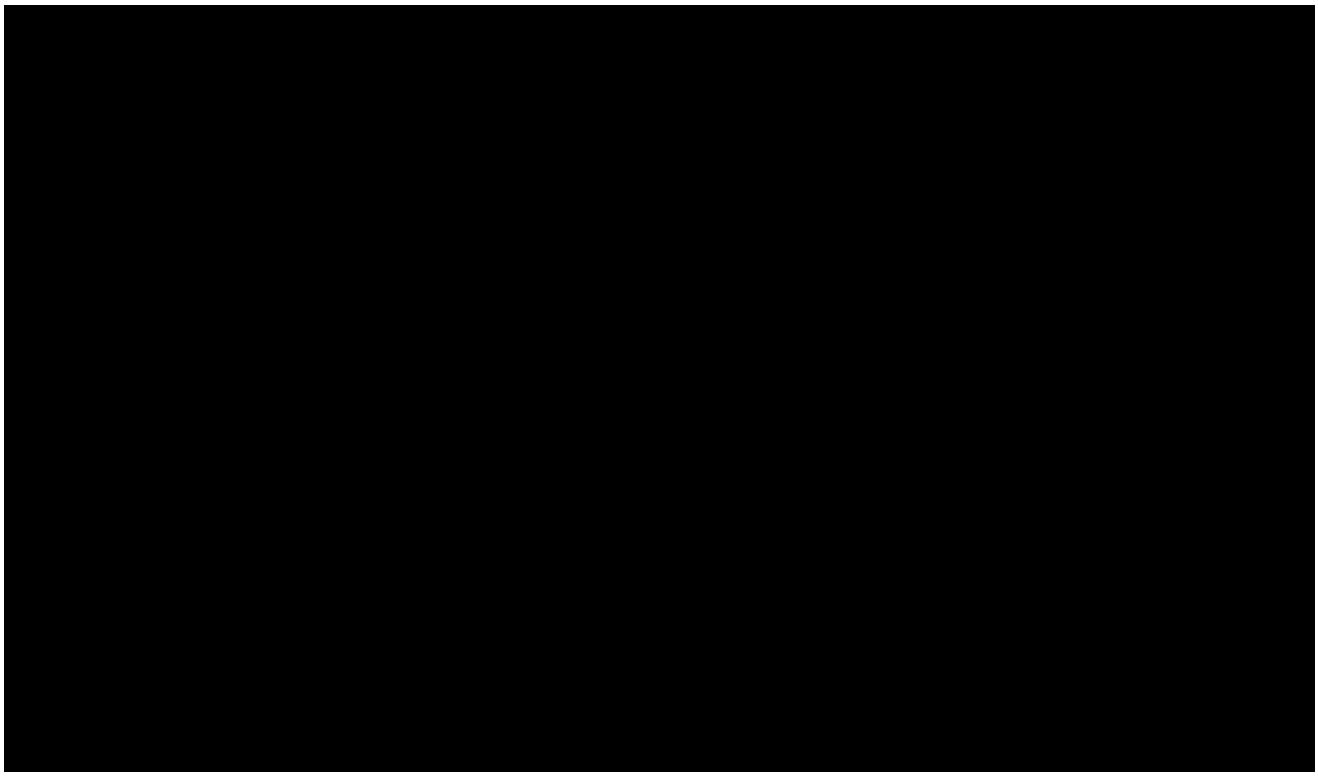

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